[redacted]

405139

279

R. D. O'Neill, Administrative Officer
Division of Biology and Medicine

March 9, 1953

Walter D. Claus, Chief
Biophysics Branch, Division of Biology and Medicine

R

MATERIAL FOR MONTHLY PROGRESS REPORT - FEBRUARY 1953

Residual Environmental Contamination - Tumbler/Snapper Data. ([redacted])

Observations on the intensity of radioactive fallout in areas near the Nevada Proving Ground have been continued since the test series in 1952 (Tumbler/Snapper). Calculations from the data observed at Oroom and Lincoln mines, and the town of Pioche show that in January 1953, residual levels of activity should amount to about 0.5, 0.1 and 0.5 milliroentgens per hour, respectively. Actual observations, however, show that the radiation levels are approximately normal background, i.e., 0.02 - 0.03 milliroentgen per hour. It thus appears that in addition to radioactive decay, other factors such as weathering (scattering by winds, penetration into soil as a result of snow and rain), are effective in reducing residual environmental dosage effects far below the levels which have been considered. It may be that further studies on this question will indicate that environmental hazards due to radioactive fallout in populated areas near the site have been overestimated.

Title of Project: "The Separation of the Proteins of Lymphoid Tissue and Their Characterization as Regards Radiation Sensitivity". (Unclassified)
Professional Personnel: Eugene L. Wess, Principal Investigator
Institution: Northwestern University Medical School

Dr. Wess and associates, investigating methods for separation of various components of lymphoid tissue, have isolated a protein in the cytoplasmic nucleoprotein fraction which has unusual sensitivity of ultraviolet light and to alkalinity. Since lymphoid tissue is known to be highly sensitive to radiation damage this finding may prove to be significant. Additional work is needed to further purify and characterize this component.

Meteorological Program at Brookhaven. (Unclassified)

A meteorological research program has been approved recently at Brookhaven National Laboratory to study the phenomena of turbulent diffusion and air movements at both high and low levels. The Laboratory has unique facilities and excellent equipment which can be utilized for such studies. In addition, an experienced staff is available which is thoroughly familiar with meteorological phenomena of this type, and is also cognizant of the problems associated with Commission operations.

The effect of weather on Commission activities introduces a variety of problems of atmospheric pollution, radioactive affluents, fallout

OFFICE ▶	BMBP			ORGANIZATION & MANAGEMENT	
SURNAME ▶	CLAUS WDC mc				
DATE ▶	3-9-53				

Form AEC-318 U. S. GOVERNMENT PRINTING OFFICE 16—62702-2

phenomena, and dispersion of bomb debris. Under the field investigations which are planned, emphasis will be placed on atmospheric turbulence and the measurement of meteorological variables using radioactive isotopes. The development of such data has basic implications in the study of industrial hygiene, waste disposal methods, and environment as related to the production activities of the Commission.

cc (rewritten by F. Laner)

OFFICE ▶						
SURNAME ▶						
DATE ▶						

Form AEC-318 U. S. GOVERNMENT PRINTING OFFICE 16—62701-2